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Hajj Investment Fund: A Bibliographic Study of The Hajj Economy

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This study explores the development of research on the hajj's economy (pilgrimage) published in reputable journal papers. The data analysed included more than 66 indexed research publications. The entire sample of journal publications has been published during the 18 years from 2003 to 2020. The export data is then processed and analysed using the VOSviewer application to determine a bibliometric map of the research's development. The results show that the number of publications on the development of hajj's economic research from 2003-2020 experienced a fluctuating increase, and most papers were published in 2019 with 15 articles (22,7%). Network visualisation showed that the map of the research was divided into 4 clusters. Cluster 1 consists of 15 topics; cluster 2 consists of 11 topics; cluster 3 consists of 11 topics, and cluster 4 consists of 10 topics. The findings of this study are in the form of suggestions for alternative research on the hajj investment fund.

Key Words: hajj fund, economy of hajj, bibliometric analysis

Introduction

Hajj, as the fifth pillar in Islam, is not only intended to increase piety and spiritual values for those who carry it out, but it turns out that Hajj also has enormous economic potential (Antonio, 2006). As stated in the word of Allah surah Al-Hajj verses 27 to 28:

Call 'all' people to the pilgrimage. They will come to you on foot and every lean camel from every distant path, so they may obtain the benefits 'in store' for them, and pronounce the Name of Allah on appointed days over the sacrificial animals He has provided for them. So eat from their meat and feed the desperately poor.

This verse shows Allah's command to the Islamic ummah to undertake Hajj as a spiritual journey, which is also associated with the sustenance that Allah gives to humans.

Implementing Hajj for the Indonesian people, a country with the largest Muslim population globally, occupies a high level of resources and results in many Hajj funds collected annually in banks for Hajj purposes. The Financial Management Agency known as Badan Pengelola Keuangan Haji (BPKH) is an institution which acts as a representative of the community and manages their money, which is invested in various investment instruments so that they can provide benefits and the funds are not idle. On the contrary, the funds continue to be productive while still considering the security of public money which will later be used to carry out Hajj.

The Republic of Indonesia's Government observes that the Hajj fund can be a potential source of infrastructure financing. The National Development Planning Agency or Bappenas has proposed using the Sukuk instrument for Hajj funds to finance infrastructure projects. The Secretary-General of Hajj and Umrah Organizers of the Directorate General of PHU identifies that the allocation

of Hajj funds is placed in the state assets fund in the SBSN instrument to the value of 35 trillion rupiahs, it is invested in Islamic bank deposits amounting to 54 trillion rupiahs, 136 billion is invested in Islamic bonds, and so on (Fahmi, 2017).

The magnitude of economic potential that comes from Hajj funds has become an interesting topic to discuss and various authors have conducted research on this theme. Several studies have been conducted by researchers and published in journals. This research paper then generally explores research trends related to Hajj's economy using a bibliometric approach. Research by reviewing the literature has been quite widely carried out but rarely uses a bibliometric approach to see an overview of the development of trends, so this research is the first study to present a more comprehensive mapping of the pilgrimage economic trends with data for the last 18 years and the addition of bibliometric visualisation.

More than 60 relevant scientific research papers have been published by digital object identifier equipped journals. This includes both Indonesian journals and other countries globally during the observation period of the last 18 years, from 2013 to 2020, specifically discussing the economic theme of the Hajj fund - it does not include research on umrah and other religious trips to Saudi Arabia. The distribution of papers with the Hajj economy's theme varies each year but tends to be a range from 1 to 15 papers each year. The purpose of this study is to identify tendencies and trends of research from various countries in exploring the best investment allocation suggestions from the Hajj funds to be applied to the model in the Indonesian Hajj fund management institution, namely the Hajj Financial Management Agency (BPKH).

Literature Review

Hajj is a journey of worship and the fifth pillar of Islam in which there are activities to visit the Kaaba, sa'i, wukuf in Arafah, and so on. Hajj is mandatory for every capable Muslim (who has reached the degree of *istitha'ah*) at least once in a lifetime. (Mashudi *et al.*, 2019). The term 'can afford' (*'istitha'ah'*) is the most important because pilgrimage to the holy city Mecca's costs a substantial amount of money, so the result is that the pilgrimage funds which are collected are large enough to be invested (Baig, 2016).

Due to the immense potential returns from Hajj fund investment, several countries have formed special institutions that regulate and manage Hajj funds to improve Hajj implementation quality, increase rationality and efficiency in using Hajj funds, and increase the benefits for Muslims (Sarniti & Wirdyaningsih, 2020). For example, in Indonesia, with the Hajj Fund Management Agency (BPKH), regulations are based on Law no. 34 2014, which provides authority over the management and development of Hajj funds (Kurniadi *et al.*, 2019).

Other Muslim-majority countries such as Malaysia, Jordan, and the Maldives have also established legal entities / institutions to manage the Hajj funds of Hajj savers and provide Hajj-related services (Muneeza *et al.*, 2018). Research on Hajj funds is typically conducted in countries with larger Muslim populations, such as Indonesia, India, Lebanon, Tunisia, Dubai, and Qatar (Ladki & Mazeh, 2017).

Several studies related to Hajj funds have examined the development of a computerised system for Hajj funds, a saving system for the management of Sukuk and the growth of Islamic investment in Hajj funds following Islamic law (Arabiyat *et al.*, 2016).

In improving Hajj service quality, Saudi Arabia has made improvements in the hotel, tourism, and telecommunications sector in general and transformed Mecca's tourism infrastructure in general (Qurashi, 2017). This shows that there are economic factors that influence and are affected by the pilgrimage (Shaheen, 2019), but, the improved standards need to be paid for. Thus, each individual who wants to participate in Hajj has several needs and requirements that must be met before and after their trip, and this is why money collected (Akbulut & Ekin, 2018). But, over time, the number of people who perform the Hajj is increasing, while the quota has been getting smaller, this means the pilgrimage fund was accumulating. However inflation occurs every year and thus, one solution to the Hajj fund's problem is to invest in productive fields (Muheramtohad, 2019).

Bibliometrics

Bibliometric mapping is an important research method in the bibliometric field (Borner *et al.*, 2003). Two different bibliometric aspects are the construction of the bibliometric map and the graphical representation of the map. In bibliometric literature, the most significant

concern is with the construction of the bibliometric map. Research related to the effects of differences in similarity measures (Ahlgren *et al.* 2003, Klavans and Boyack 2006a, Van Eck and Waltman 2009) has been undertaken and tested with different mapping techniques (Boyack *et al.* 2005, Van Eck and Waltman 2007b, White 2003). However, the graphic representation of the bibliometric map has received less attention. Although some researchers seriously study graphical representations (Chen 2003, 2006, Skupin 2004), most articles published in the bibliometric literature rely on simple graphical representations provided by computer programs such as SPSS and Pajek.

For thumbnails containing no more than 100 items, a simple graphical representation usually yields satisfactory results. However, there appears to be a trend toward larger maps (e.g., Boyack *et al.* 2005; Klavans and Boyack 2006b; Van Eck *et al.* 2006), and for such maps, simple graphical representations are not adequate. A large bibliometric map's graphical representation can be further improved by using a zoom function, unique labelling algorithms, and density metaphors. Such functionality is not included in the computer programs commonly used by bibliometric researchers. In this paper, we introduce a new computer program for bibliometric mapping. This program pays special attention to the graphical representation of bibliometric maps.

VOS (Similarity Visualisation)

This section discusses the use of Similarity Visualisation (VOS), which is used to build a bibliometric map. VOS's purpose is to place items in such a low dimension that the distance between two items accurately reflects these items' uniformity or association. For each pair of items i and j , VOS requires a similarity input s_{ij} ($s_{ij} \geq 0$). VOS treats the equation s_{ij} as a measure on a ratio scale. The equation s_{ij} is usually calculated using the association's strength defined in Equation 1 (e.g., Van Eck & Waltman, 2007b; Van Eck *et al.*, 2006). VOS determines the location of items on the map by minimising the following

$$V(x_1, \dots, x_n) = \sum_{i < j} s_{ij} \|x_i - x_j\|^2 \quad (1)$$

to:

$$\frac{2}{n(n-1)} \sum_{i < j} s_{ij} \|x_i - x_j\| = 1 \quad (2)$$

Therefore, VOS's idea is to minimise the weighted sum of the squares of the distance between all pairs of items. The equation between those items weights the square of

the distance between pairs of items. To avoid worthless solutions, where all items have the same location, limits are imposed so that the average distance between two items must be equal to one.

Two computer programs have implemented the VOS mapping technique. Both are available free of charge. A simple open-source program is available at www.neesjanvaneck.nl/vos/, and a more advanced program called VOSviewer (Van Eck & Waltman, 2010) is available at www.vosviewer.com. Both programs use the variant of the SMACOF algorithm mentioned above to minimise Equation 1 to Equation 2.

Methodology

This study uses paper publication data sourced from various journal papers with research on the Hajj economy theme. The data were collected through tracing papers in the last 18 years, to be precise, from 2003 to 2020. From the search results, 66 published articles were obtained. Data in the form of the number of published papers on the theme of Hajj economics, methodological approaches, top authors, and top agencies contributing to publishing articles were analysed using Microsoft Excel 2010. Meanwhile, trends in the development of Hajj economic publications were analysed using VOSViewer software.

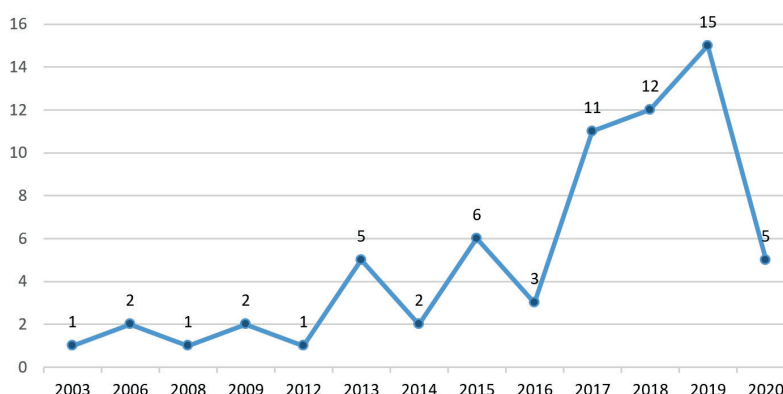
The computer program that was introduced is called VOSviewer. VOSviewer is developed for building and viewing bibliometric maps and is freely available to the bibliometric research community (see www.vosviewer.com). VOSviewer can create author maps or journal maps based on cocitation data, or build keyword maps based on shared incident data. The program offers a viewer that allows the bibliometric map to be examined in detail.

VOSviewer can display maps in a variety of ways, each emphasising a different aspect of the map. It has functions for zooming, scrolling, and searching, which facilitate detailed inspection of the map. VOSviewer's display capability is beneficial for maps containing a large number of items (e.g., at least 100 items). Most other computer programs for bibliometric mapping do not adequately display such maps.

VOSviewer uses the VOS mapping technique (Van Eck and Waltman 2007a), where VOS stands for similarity visualisation. Previous studies in which VOS mapping techniques were used refer to Van Eck and Waltman

Table 1: Number of Hajj Fund Papers

Year	Number of Paper
2003	1
2006	2
2008	1
2009	2
2012	1
2013	5
2014	2
2015	6
2016	3
2017	11
2018	12
2019	15
2020	5
Total	66

Figure 1. Number of Hajj Fund Papers

(2007b) and Van Eck *et al.* (in press). VOSviewer can display maps which have been built using suitable mapping techniques. Therefore, this program can display maps built using the VOS mapping technique and display maps built using multidimensional scaling techniques. VOSviewer runs on many hardware and operating system platforms and can be started directly from the internet.

Analysis

This section discusses the papers which have been published on the theme of the Hajj economy. There were 66 papers published within the 18 year period of observation - 2003 to 2020. Table 1 presents the distribution of papers per year, which varied over the last 18 years with a range of 1 to 15 papers. The highest number of papers on the Hajj economy theme was published in 2019 with 15 papers (22.7%) and the fewest, i.e. one paper published, occurred in 2003, 2008, and 2012.

Based on the table and graph, there is a fluctuation, accompanied by an overall increasing trend in the number of papers published by various journals with the Hajj economy as a theme. In 2003 there was only one paper, this increased to 2 papers in 2006 and 2009. The next increase occurred in 2013 with 5 papers and 6 papers in 2015. From 2017 to 2019 there was a constant increase from 11 papers to 12 and then 15 papers, but in 2020 there was a decrease to 5 papers. However, this is because 2020 was not complete, as data collection for this study was undertaken in August 2020.

Of the 66 papers published with the theme of Hajj economics in the last 18 years, the title of the most

extensive paper is 'Analysis Of The Fatwa Mechanism Of Dsn-Mui Application No. 29 / DSN-MUI / Vi / 2002 Hajj Credit Financing In Islamic Financial Institutions' which is a Case Study by Paramita *et al.* (2017). This paper discusses the application of fatwa regulation DSN MUI No. 29 of 2002 concerning the Financing of Management of Hajj for Islamic Financial Institutions at BPRS Amanah Ummah. The research results indicate that the products provided by the object of the research have been permitted by sharia according to the MUI DSN fatwa.

Meanwhile, the shortest paper title is 'Management of Hajj funds in Indonesia' (Jumali, 2018), which discusses Hajj financial management in Indonesia. According to the author, Hajj funds can be used as an investment to support infrastructure because prospective pilgrims who register and save their money for Hajj have signed a *wakalah* contract which gives BPKH flexibility to optimise these funds while still prioritising the safety of customers' Hajj funds.

Alternative Topics for Hajj Funds

Table 2 illustrates some alternative topics which are included in the research papers on the Hajj economy theme. Based on the following table, it can be seen that the top 3 alternative topics are 35 papers related to Islamic banks, then 21 on property, and 20 dealing with infrastructure. Each paper can contain more than one topic, so the number is more than the number of papers used as the object of research.

Table 2: Alternative Topics

Topics	Number of Paper
Islamic Bank	35
Property	21
Infrastructure	20
Sukuk	15
Agriculture	15
Securities	13
Oil & Gas	13
Direct Investment	12
Gold	8
SBSN	7

The topics with lower levels of discussion were gold which is a topic in 8 papers and SBSN, which is researched in 7 papers. The absence of relatively complete and comprehensive data may be why papers related to some of the less-researched topics is not more widely published in papers on the Hajj economy theme.

Research Approach Type

Based on Punch (2013), there are 3 types of research approaches, namely qualitative, quantitative and mixed methods. Figure 2 shows the research methodology used by the published papers from 2003 to 2020. In this observation, the most widely used approach is qualitative research, namely 51 papers (77.2%), followed by a quantitative approach of 15 papers (22.7 %). None of the papers used a mixed approach (0%).

The findings indicate that the volume of empirical research is far less than that of conceptual research. The research model that is widely used in qualitative methods

is descriptive. The empirical research models most widely used are structural equation modelling (SEM), descriptive statistics, and linear regression.

Top Authors

Table 3 shows the four most prolific authors of papers published on the Hajj economy theme in the last 18 years.

Table 3: Top Authors

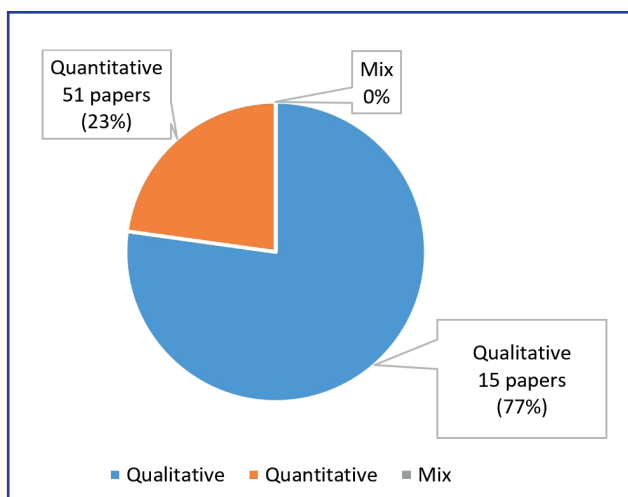
Author	Number of Paper
Ismal, Rifki	3
Wirnyaningsih	3
Nursanita	2
Wasiuzzaman, Shaista	2

As shown, two authors wrote three published papers each on the theme of Hajj economics, namely Rifki Ismal and Wirnyaningsih. Two authors wrote two published papers on the topic - Nursanita and Shaista Wasiuzzaman. There are 120 other authors who are not listed in the table above who have only written / co-authored one paper on the Hajj economy theme, and thus, overall 124 authors are included in this investigation.

Rifki Ismal participated in writing a paper entitled 'Optimal Hajj Funds Management by Islamic Bank' (Pratiwi *et al.*, 2019), then a paper entitled 'Islamic hedging for pilgrimage funds: the case of Indonesia' (Ismal & Septiana, 2019), as well as an earlier paper entitled 'The Proposed Islamic Hedging for Hajj Funds in Indonesian Islamic Banking' (Fikri *et al.*, 2018).

In 2019, Wirnyaningsih participated in writing a paper entitled 'General Welfare Improvement Through Optimization of Hajj Funds with Productive Waqf' (Nurchaliza & Wirnyaningsih, 2019), then in 2020 two papers - one entitled 'Optimization of Hajj Fund Management in Indonesia with Productive Zakat' (Sarniti & Wirnyaningsih, 2020) and the other entitled 'Alternative Optimization of Hajj Fund Using Sharia Shares' (Deananda & Wirnyaningsih, 2020).

Nursanita wrote papers entitled 'Ta'awun Pattern of Governance of Hajj Funds' (Nursanita *et al.*, 2019) and 'The Rough Way to Management Hajj Fund (BPKH) Implementing Governance of Hajj Fund' (Nursanita & Faruqi, 2019). Also involved

Figure 2: Research Approach Type

in publishing two papers, Shaista Wasiuzzaman wrote in publication entitled ‘Religious anomalies in Islamic stock markets: The Hajj Effect in Saudi Arabia’ (Wasiuzzaman, 2018) and also contributed in the writing of ‘The Rough Way to Management Hajj Fund (BPKH) Implementing Governance of Hajj Fund’ (Nursanita & Faruqi, 2019).

Top Institutions

Table 4 shows a ranking of the top 9 institutions affiliated with the authors over the past 18 years. The total number of institutions affiliated with the authors of papers is 61 institutions from a variety of countries. The results show that the most productive author-affiliated institution, is the University of Indonesia (UI), which produced 11 authors, followed by International Islamic University Malaysia (IIUM) with 9 authors, then Airlangga University (Unair)

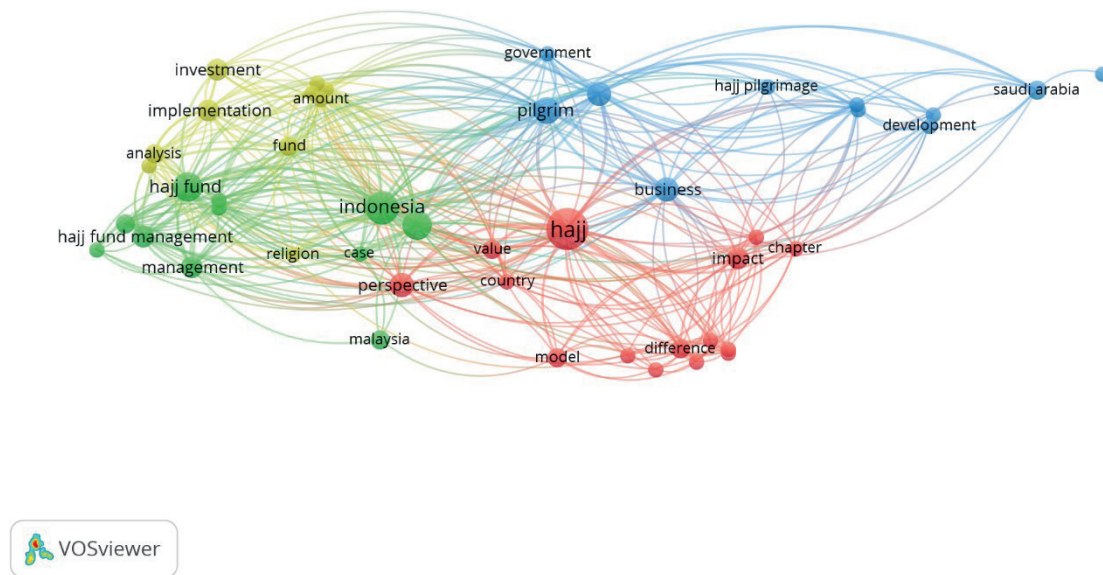
Institution	Total
University of Indonesia (Indonesia)	11
IIUM (Malaysia)	9
Airlangga University (Indonesia)	6
UIN Syarif Hidayatullah Jakarta (Indonesia)	5
INCEIF (Malaysia)	4
Ibn Khaldun University (Turkey)	4
IPB University (Indonesia)	4
University of Brawijaya (Indonesia)	4
Universiti Utara Malaysia (Malaysia)	4

with 6 authors, then UIN Syarif Hidayatullah Jakarta with 5 people, followed by five institutions with four authors each. Interestingly, institutions from Indonesia dominate the top rankings. This shows that Indonesia’s institutions are more productive than other institutions in researching the Hajj economy theme.

Table 5: Top Citations

Cit.	Title	Author	C/Y
323	Estimating the Impact of The Hajj: Religion and Tolerance in Islam’s Global Gathering	(Clingsmith <i>et al.</i> , 2009)	26.92
91	Spiritual journey to Hajj: Australian and Pakistani experience and expectations	(Haq & Jackson, 2009)	7.58
50	Pilgrims’ progress: The business of the hajj	(Miller, 2006)	3.33
25	Does hajj pilgrimage affect the Islamic investor sentiment?	(Abbes & Abdelhédi-Zouch, 2015)	4.17
25	The effect of post- purchased perceived-value Towards The relationship quality of hajj and umrah travel agencies in Indonesia	(Oktora & Achyar, 2014)	3.57
23	The effect of demographics on customer satisfaction amongst Malaysia hajj pilgrims: Survey result	(M. F. Ahmad <i>et al.</i> , 2014)	3.29
21	Muslim perspectives on spiritual and religious travel beyond Hajj: Toward understanding motivations for Umrah travel in Oman	(Almhrzi & Alsawafi, 2017)	5.25
15	Governing Hajj: Politics of Islamic Pilgrimage Services in Indonesia Prior to Reformasi Era	(Ichwan, 2008)	1.15
12	Hak Angket Haji: Pilgrimage and the Cultural Politics of Hajj Organization in Contemporary Indonesia	(Darmadi, 2013)	1.50
11	Pilgrimage experience and consumption of travel to the City of Makkah for the Hajj ritual	(Raj & Bozonelos, 2015)	1.83
10	A study of the relationship between the growth in the number of Hajj pilgrims and economic growth in Saudi Arabia	(Kouchi <i>et al.</i> , 2018)	3.33
9	Seasonality in the Saudi stock market: The Hajj effect	(Wasiuzzaman, 2018)	3.00
9	Development of Hajqual: a marketing research tool to measure Hajj service quality	(Jabnoun, 2003)	0.50
8	Religious anomalies in Islamic stock markets: The Hajj Effect in Saudi Arabia	(Wasiuzzaman, 2017)	2.00
6	The Hajj by Japanese Muslims in the interwar period: Japan’s Pan-Asianism and economic interests in the Islamic world	(Koyagi, 2013)	0.75
6	Economy of Hajj: The Neglected Fortune	(Antonio, 2006)	0.40
5	Management of Hajj funds in Indonesia	(Jumali, 2018)	1.67
5	The model of persuasive Hajj learning environment	(Yusoff <i>et al.</i> , 2015)	0.83
5	Haji Dan Kegairahan Ekonomi: Menguak Makna Ibadah Haji Bagi Pedagang Muslim di Yogyakarta	(Sulthoni <i>et al.</i> , 2013)	0.63
5	Pelaksanaan Pembiayaan Dana Talangan Haji Pada Perbankan Syariah	(Susana & Kartika, 2013)	0.63

Figure 3: Bibliometric Keywords



Top Citation

Table 5 shows the top 20 papers ranked by total citations from the time of publication to the time this research was undertaken (August 2020). Of the 66 papers published on the theme of the Hajj economy in the last 18 years, namely from 2003 to 2020, the citations were dominated by papers published in 2017 and 2018.

The highest ranking, with a total of 323 citations, is a paper with the title 'Estimating The Impact Of The Hajj: Religion And Tolerance In Islam's Global Gathering' (Clingsmith *et al.*, 2009) with a C/Y value which is also the highest, amounting to 26.92. In second place with a total of 91 citations is a paper with the title 'Spiritual journey to Hajj: Australian and Pakistani experience and expectations' (Haq & Jackson, 2009) with a C/Y value of 7.58, in third place, is a paper with the title 'Pilgrims' progress: The business of the Hajj' (Miller, 2006) with a C/Y value of 3.33.

The three papers above have one main similarity, that they are published before 2010. This shows that writings that refer to the Hajj economy theme have been around for a long time and these earlier works have been widely cited in recent studies as the topic develops more deeply.

Bibliometric Mapping

This part of the paper will present a graphical visual mapping of papers published on the Hajj economy's theme. The keyword mapping analysis results form the basis for the co-occurrence mapping of important or unique terms in a particular article. Mapping is a process that allows a person to recognise elements of knowledge and their configuration, dynamics, interdependencies, and interactions.

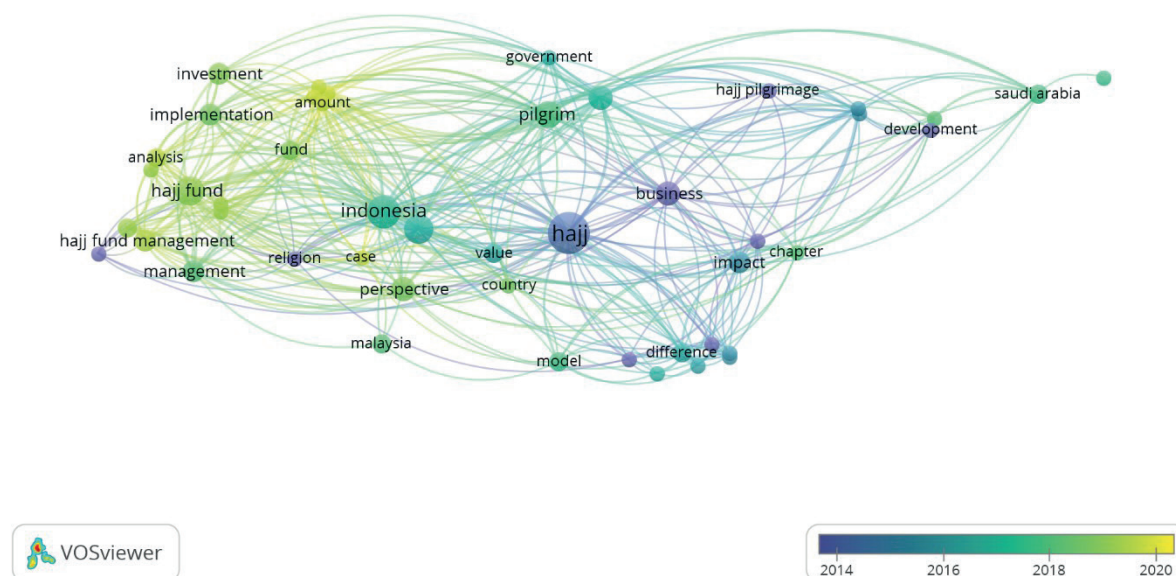
Keywords

Related to bibliometrics, science mapping is a method of visualising a field of science. This visualisation is done by creating a landscape map displaying science topics. A visualisation of the co-word map network of the publications on the Hajj economy theme can be seen in Figure 3.

In this mapping, several keywords that have frequently appeared in papers on the theme of the Hajj economy in the last 18 years are displayed as is their relation to other keywords, formed into 4 clusters, namely:

Cluster 1 in red consists of 15 keywords: *chapter, country, customer loyalty, customer satisfaction, difference, effect, Hajj, Hajj service, impact, Makkah, model, perspective, tolerance, value, year.*

Figure 4: Bibliometric Keywords Per Year



Cluster 2 in green consists of 11 keywords: *authority, bpkh, case, expectation, Hajj fund, Hajj fund management, Indonesia, Malaysia, management, paper, and study.*

Cluster 3 in blue consists of 11 keywords: *business, development, economic growth, government, Hajj effect, pilgrim, Hajj pilgrimage, pilgrimage, religious tourism, Saudi Arabia, and umrah.*

Cluster 4 in yellow consists of 10 keywords: *amount, analysis, fund, implementation, Indonesian Hajj fund, investment, pilgrimage fund, religion, research, and rupiah.*

The keyword clusters are arranged in the form of coloured circles within each set, indicating the clusters.

If the keywords are classified based on publication year, the mapping results are found in Figure 4. The key to this chart is as follows: purple, green, and yellow intervals. The darker (purple) it indicates, the older publication year, and the lighter (yellow) indicates a more recent publication year.

These data can be useful in determining keyword trends over the last 18 years. The analysis shows several keywords that have been widely used since 2014, namely

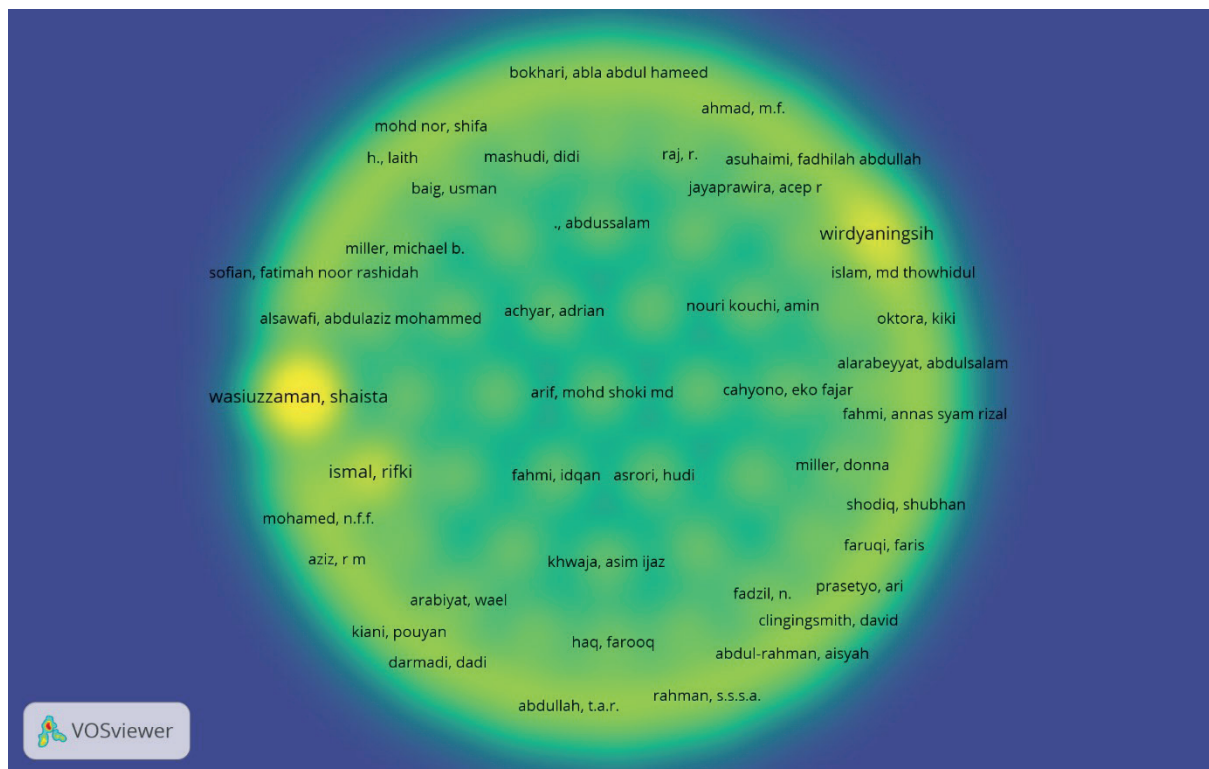
Hajj fund, religion, Hajj, business, Hajj pilgrimage, Hajj service, development. Conversely, the most recent and widely used keywords since early 2020 include *Hajj fund management, bpkh, analysis, research, amount and case.*

A further detail in Figure 3 and Figure 4 is that the keywords which appear most frequently are indicated as a larger circle. Meanwhile, the line relationship between keywords shows how much it is related to other keywords. It was found that the most common keywords were *Hajj, Indonesia, Hajj Fund, and Business.*

Authors

Meta-analysis of the top authors' names was mentioned earlier. The top authors of papers on the Hajj economy theme are further examined using the VOSViewer software - this author bibliometric mapping is found in Figure 5. The bigger and brighter the circle of light around the author's name, the more papers they have published in the themed papers over the last 18 years.

The cluster density view presents the item (label), marked as a visible item. Each item dot has a colour depending on the density of the item at that time. The map points' colour depends on the number of items associated with the items (i.e. in this instance each author). This procedure

Figure 5: Bibliometric Analysis of Authors

is useful for obtaining an overview of the bibliometric map's general structure. Through this worksheet, we can interpret the authors who have written the most publications. There are many clusters if sorted by author. The most prolific writers on Hajj economy, based on bibliometric mapping are Wasiuzzaman, Wirdyaningsih, and Ismal.

This mapping not only displays the top ranking authors from the meta-analysis. In addition, VOSViewer also considers the number of links between individual authors, and places co-authors close to each other. The visualisation of the mapping of journals that publish is depicted in bibliometric figure 6. Based on this picture, several journal clusters appear to be listed in a glowing circle, indicating the journal's productivity in publishing its paper on the Hajj economy's theme.

Journals & Citations

Most journals, in terms of the number of publications, links to other journals, and an author can write many papers in different journals. Among the top journal, rankings are the *International Journal of Religious Tourism and Pilgrimage*, then *KnE Social Sciences*, and in third place, *The International Conference Proceedings* (see Figure 6).

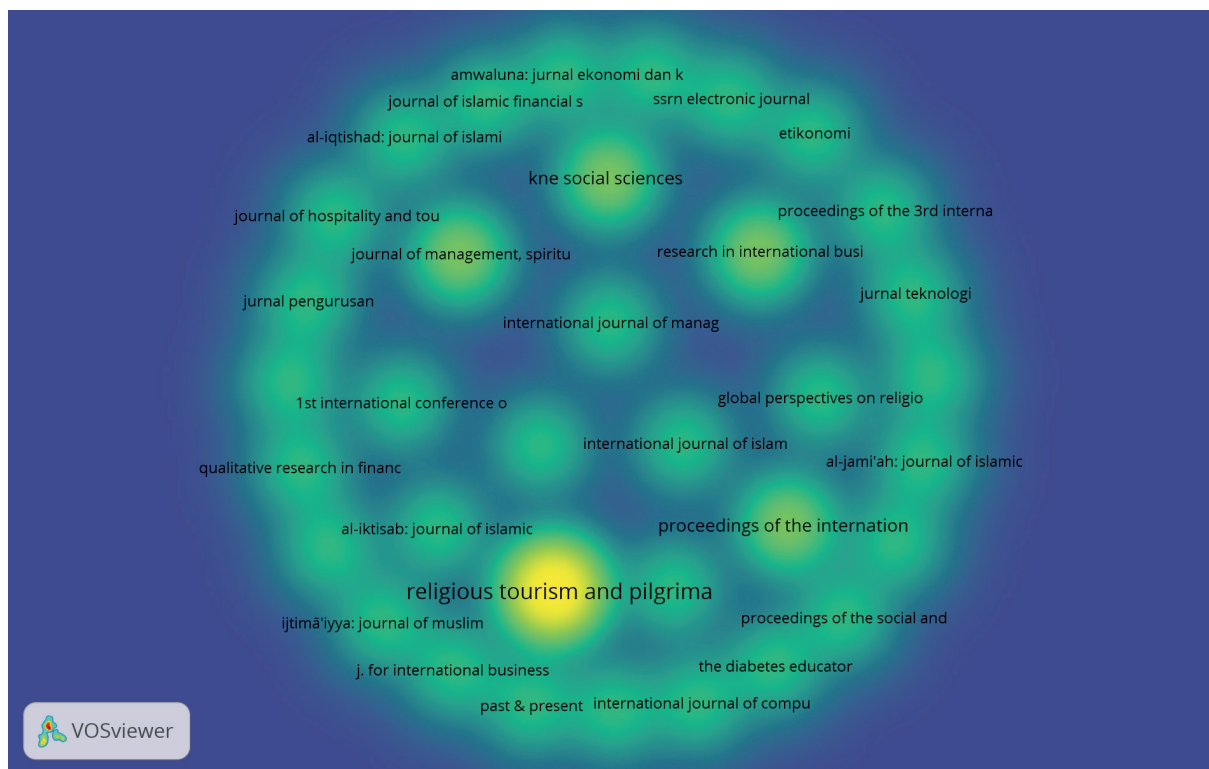
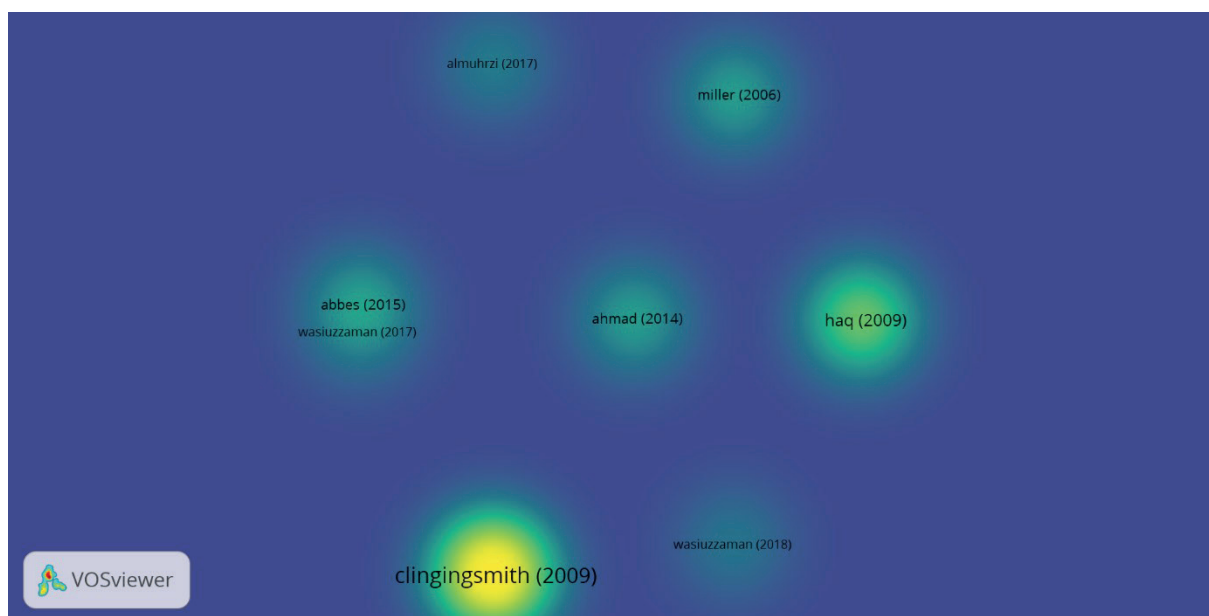
In VOSViewer bibliometrics, the mapping of citation levels can be displayed - as seen in Figure 7. The citations of the top seven Hajj economy themed papers are displayed in this bibliometric map. The results show that Clingingsmith (2019) is the most referenced paper. The second is Haq (2009), followed by Miller (2006) in third place. Next are Abbes & Abdelhédi-Zouch (2015) and Wasiuzzaman (2017), where both have a citation link. The names Ahmed (2014), Wasiuzzaman (2018), and Almuhrzi (2017) also appear.

Discussion

Based on the meta-analysis and bibliometrics above, much information regarding the theme of Hajj economics is obtained. If one seeks to focus on Hajj fund investment in particular, one can see in Table 2 about this and other alternative topics that have been published during the last 18 years. The top 3 topics have been Islamic banking, then property and infrastructure.

Banking

Islamic banks, as sharia financial institutions, are currently developing and require many funds to be managed to carry out their function as intermediaries between surplus units and deficit units (Akbar, 2019). Thus, many studies

Figure 6: Bibliometric Journal**Figure 7: Bibliometric Citation**

have analysed the considerations of Islamic banks as an alternative tool for investment. Furthermore, investment in Islamic banking is expected to support the overall economy, because it is free from usury and speculation as in conventional banking (Cahyono *et al.*, 2017).

BPKH has made Islamic banks the primary alternative for investment placements for a long time (Muneeza *et al.*, 2018) and, in the 2018 period, appointed 31 banks consisting of Sharia Commercial Banks (BUS) and Sharia Business Units (UUS) that accept pilgrimage funds which are included in third party funds (DPK) (Mashudi *et al.*, 2019). Later through Islamic banks, organisations can

manage these funds in a portfolio consisting of Islamic financing and Islamic capital market instruments (Pratiwi *et al.*, 2019).

Most research in this overall theme is in the area of Islamic banking, this is not surprising, considering that Islamic banking is one of the most critical institutions in the Islamic economy, and requires a lot of third party funds to be managed and returned to society. It is hoped that the placement of Hajj fund investments in Islamic banking is specifically able to overcome the liquidity problems of Islamic banking and, in general, be able to support the development of Islamic banking in the Indonesian economy.

Property

The next alternative theme in relation to Hajj fund investment is the property or real estate sector. The property sector is an investment instrument that can generate fixed income and a low level of risk even though the profits are not too high (Jayaprawira & Abdussalam, 2019). Property investments can also be made flexibly in local and global markets (K. Ahmad *et al.*, 2012; Arabiyat *et al.*, 2016). This type of investment can also strengthen the role of institutions such as BPKH in coordinating the increase in Hajj funds (Soh, 2018).

Investments in the property sector can be done by investing in the long term (Deananda & Wirdyaningsih, 2020) while maintaining sharia principles (Muneeza *et al.*, 2018) as has been done by the Tabung Haji institution in Malaysia (Baig, 2016), or also through sharia securities that have been regulated and supervised by OJK in the form of sharia real estate investment (Munira & Astuti, 2019).

The placement of Hajj fund investment in the property sector has reasonably long-term benefits that are not too high compared to other investment alternatives. However, the advantage is that the risk is also lower. It can be adjusted to the number of funds available if it is sufficient for investment with high profits and remaining residual, BPKH could consider allocating the Hajj fund investment in the property sector.

Infrastructure

Finally the third most important allocation of Hajj funds as mentioned in the literature is infrastructure. Infrastructure development means building in a country

can be done by investing Hajj funds in infrastructure financing, as occurred when President Joko Widodo established the BPKH institution in 2017 (Rahman *et al.*, 2020).

Investment in infrastructure is allowed by Law Number 34 of 2014, which states that BPKH has a role in managing Hajj fund investment in the infrastructure sector. This is because Indonesia faces challenges in infrastructure development in various regions and still needs funds. Large amounts of Hajj funds are expected to be allocated to this sector (Jumali, 2018). Also, infrastructure can refer to projects related to Hajj facilities and operational needs so that the faithful will be more comfortable in undertaking their pilgrimage (Alfiyanti *et al.*, 2019).

Infrastructure is one of the main priorities in the alternative allocation of Hajj fund investments under the benefits obtained from using the infrastructure and providing convenience in organising Hajj. This is allowed in Islam (Fahmi, 2017).

Conclusion

This research aims to determine the treatment of the Hajj economic theme in research, with an emphasis on Islamic economic and financial analysis. The results show a fluctuation in the number of published papers each year. Still, there is a tendency for an increased volume of articles on the Hajj economy during the research period under investigation, especially in the last 13 years. The greatest volume of papers was in 2019 with 15 papers (22.7%), and the least was in 2003, 2008, and 2012 with 1 paper each (1.5%).

Many methods have been employed when carrying out research related to Hajj economics. The most used research approach is a qualitative approach with 51 papers (77.2%), followed by a quantitative approach with 15 papers (22.7%). None of the published papers used a mixed methods approach.

The most productive writers published three papers on Hajj economics, namely Rifki Ismal and Wirdyaningsih, then two writers published two papers - Nursanita and Shaista Wasiuzzaman. The most active institution is the University of Indonesia, which produces 11 writers, followed by International Islamic University Malaysia with 9 writers, then Airlangga University with 6 authors.

The bibliometric mapping visualisation tool shows that research development in the Hajj economy is divided into 4 clusters. Cluster 1 consists of 15 topics; cluster 2 consists of 11 topics; cluster 3 consists of 11 topics, and cluster 4 consists of 10 topics. It was found that the most popular keywords were Hajj, Indonesia, Hajj Fund, and business. Based on bibliometric mapping, we can see that the journals which are most popular for publishing articles related to the Hajj economy are: the *International Journal of Religious Tourism and Pilgrimage*, then *KnE Social Sciences*, and in third *International Conference Proceedings*. The paper with the most citations based on bibliometric mapping is Clingingsmith (2019), which is the most popular paper, the second one is Haq (2009), followed by Miller (2006) in third place.

It should be noted that this study aims to present an overview of the research trends in relation to the Hajj economic theme, but this work has only looked at the last eighteen years. The research has been carried out using specific bibliometric indicators so that readers get a general representation of the most critical data on the pilgrimage economy themed papers. The results presented here are still dynamic, they can change over time with new emerging trends or increasing variables in this theme going forward.

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